

SEARCH REQUEST FORM

5-893

Examiner # (Mandatory): 76197 Requester's Full Name: Gaile R. GabelArt Unit 1641 Location (Bldg/Room#): 17D16 Phone (circle) 305 306 308 0807Serial Number: 09/087871 Results Format Preferred (circle): PAPER DISK E-MAIL

✓ Title of Invention Automated Diagnostic System Implementing
ImmunoAssays and Clinical Chemistry Assays Access Via
 ✓ Inventors (please provide full names): Wagner, Gerald REFLEX ALGORITHM

✓ Earliest Priority Date: 6-2-98

→ Cardiac markers include:
citrate synthetase, myoglobin,
CPK, CK Isoenzymes, LDH, LD
IsoEnzymes, Troponin

Keywords (include any known synonyms registry numbers, explanation of initialisms):

ImmunoAssay
 Immunochemistry
 Clinical chemistry
 Hematology
 HemuAnalyzer
 Analyzer
 Instrument
 Instrumentation
 Diagnostic System
 Biological Markers
 Cardiac Markers
 Cardiac Enzymes
 Cardiac Profile
 Coronary Profile
 ↓
 CPK IsoEnzymes
 LDH IsoEnzymes
 Troponin
 Multivariate Analysis
 Reflex Algorithm
 Reflexive Testing
 1344
 135-
 25
 35
 45
 1660
 18285

Search Topic:

Please write detailed statement of the search topic, and the concept of the invention. Describe as specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples of relevant citations, authors, etc., if known. You may include a copy of the abstract and the broadcast or most relevant claim(s).

Diagnostic System is used to assess cardiac patients by testing for cardiac markers: early, mid, late markers. Depending on early results, the succeeding tests will be coded by the analyzer itself (no human decision making involved) presently known clinically as reflexive testing. Please incorporate highlighted terms into keyword search also. Thanks!

Point of Contact:
 Mary Hale
 Technical Info. Specialist
 GM1-12DT6 Tel: 308-4258

STAFF USE ONLY

Searcher: <u>6/3</u>	Type of Search	Vendors (include cost where applicable)
Searcher Phone #: <u>Mary</u>	<input type="checkbox"/> N.A. Sequence	<input checked="" type="checkbox"/> STN
Searcher Location: _____	<input type="checkbox"/> A.A. Sequence	<input type="checkbox"/> Questel/Orbit
Date Picked Up: _____	<input type="checkbox"/> Structure (#)	<input type="checkbox"/> Lexis/Nexis
Date Completed: _____	<input type="checkbox"/> Bibliographic	<input type="checkbox"/> WWW/Internet
Clerical Prep Time: _____	<input type="checkbox"/> Litigation I	<input type="checkbox"/> In-house sequence systems (list)
Terminal Time: <u>9</u>	<input type="checkbox"/> Fulltext	<input type="checkbox"/> Dialog
Number of Databases: _____	<input type="checkbox"/> Procurement	<input type="checkbox"/> Dr. Link
	<input type="checkbox"/> Other	<input type="checkbox"/> Westlaw
		<input type="checkbox"/> Other (specify)

FILE 'REGISTRY' ENTERED AT 13:15:33 ON 03 JUN 1999
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STRUCTURE FILE UPDATES: 28 MAY 99 HIGHEST RN 223764-44-1
DICTIONARY FILE UPDATES: 03 JUN 99 HIGHEST RN 223764-44-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 13, 1999

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

=> e citrate synthetase/cn

E1 1 CITRATE SYNTHASE I (BACILLUS SUBTILIS STRAIN 168 GENE
CITA) (

performing nucleic acid amplification reactions (polymerase chain
reaction, ligase chain reaction, repair chain reaction) and can be used
for disease **diagnosis**. A typical app., which can be made of,
e.g., glass, polystyrene, etc., consists of a flat base plate that
contains a transparent surface on which the sample is placed, a hollow
cylindrical structural component that can make a liq.-tight seal with the
base plate and which forms a container, at least 0.5 mm high, that can
hold reagents, and a cover plate. The apps., which also can be
constructed to have >1 sample **processing** area, were developed as
an improvement over known **devices**, esp. to increase efficiency
and sensitivity and reduce nonspecific reactions. Qual. and quant. anal.
may be done on both DNA and RNA samples, and the method may be
automated easily.

=> dis his

S. Gabel
D8 7871

E.C.4.1.3.7)/CN
E2 1 CITRATE SYNTHASE II (BACILLUS SUBTILIS GENE CITZ)/CN
E3 1 --> CITRATE SYNTHETASE/CN
E4 1 CITRATE TRANSPORTER (HUMAN CLONE 111F11 GENE CTP)/CN
E5 1 CITRATE TRANSPORTER (KLEBSIELLA PNEUMONIAE CLONE PRS63-2
GEN
E CITS REDUCED)/CN
E6 1 CITRATE TRANSPORTER (SALMONELLA TYPHIMURIUM CLONE PCUT10
GEN
E CITA)/CN
E7 1 CITRATE TRANSPORTER PROTEIN (HUMAN CLONE 8JL-4
MITOCHONDRIA-
ASSOCIATED)/CN
E8 1 CITRATE TRIANION/CN
E9 1 CITRATE(3-)/CN
E10 1 CITRATE-ATP LYASE/CN
E11 1 CITRATE-PHOSPHATE-DEXTROSE MIXTURE/CN
E12 1 CITRATE-PHOSPHATE-DEXTROSE NAMED REAGENTS AND SOLUTIONS/CN

=> s e3

L1 1 "CITRATE SYNTHETASE"/CN

=> e myoglobin/cn 5

E1 1 MYOGENIN (SWINE CLONE MYOG14)/CN
E2 1 MYOGENIN (SWINE)/CN
E3 0 --> MYOGLOBIN/CN
E4 1 MYOGLOBIN (10-THREONINE) (APLYSIA LIMACINA CLONE PAPMB)/CN
E5 1 MYOGLOBIN (39-IOLEUCINE) (HORSE HEART)/CN

=> s myoglobin?/cn

L2 133 MYOGLOBIN?/CN

=> e cpk/cn 5

E1 1 CPIPU/CN
E2 1 CPIRON/CN
E3 0 --> CPK/CN
E4 1 CPK 10/CN
E5 1 CPK 2/CN

=> s cpk?/cn

L3 3 CPK?/CN

=> e ck isoenzyme/cn 5

E1 1 CK GEL A 32/CN
E2 1 CK GEL A 4/CN
E3 0 --> CK ISOENZYME/CN
E4 1 CK-20/CN
E5 1 CK-22/CN

=> e troponin/cn 5

E1 1 TROPONEIRON TRICARBONYL/CN
E2 1 TROPONIMINE/CN
E3 0 --> TROPONIN/CN
E4 1 TROPONIN C (ANGUILLA ANGUILLA)/CN

E5 1 TROPONIN C (ASTACUS LEPTODACTYLUS ISOFORM .ALPHA.)/CN

=> s troponin?/cn

L4 162 TROPONIN?/CN

=> e ldh/cn 5

E1 1 LDF 301/CN

E2 1 LDG 1069/CN

E3 0 --> LDH/CN

E4 1 LDI/CN

E5 1 LDI-A 200/CN

=> fil medl,caplus,biosis,embase,wpids;s (immunoassay or immunochemistry or clinical chemis? or hematolog? or hemoanalyz? or analyzer or instrument? or diagnos? system)

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L5 339754 FILE MEDLINE
L6 206012 FILE CAPLUS
L7 369282 FILE BIOSIS
L8 139987 FILE EMBASE
L9 112172 FILE WPIDS

TOTAL FOR ALL FILES

L10 1167207 (IMMUNOASSAY OR IMMUNOCHEMISTRY OR CLINICAL CHEMIS? OR
HEMATOLOG
? OR HEMOANALYZ? OR ANALYZER OR INSTRUMENT? OR DIAGNOS?
SYSTEM)

=> s (l1 or citrate synthetase or myoglobin or cpk or ck isoenzyme or ldh or
ld or isoenzyme or troponin? or 12 or 13 or 14)

<-----User Break----->

<-----User Break----->

u

SEARCH ENDED BY USER

=> s (l1 or citrate synthetase or myoglobin or cpk or ck isoenzyme or ldh or ld or isoenzyme or troponin? or l2 or l3 or l4) and l10

L11 2023 FILE MEDLINE
L12 2252 FILE CAPLUS
L13 3053 FILE BIOSIS
L14 1465 FILE EMBASE
'CN' IS NOT A VALID FIELD CODE
L15 98 FILE WPIDS

TOTAL FOR ALL FILES

L16 8891 (L1 OR CITRATE SYNTHETASE OR MYOGLOBIN OR CPK OR CK ISOENZYME OR LDH OR LD OR ISOENZYME OR TROPONIN? OR L2 OR L3 OR L4) AND L10

=> s (multivar? analysis or reflex algorithm? or reflex? test?) and l16

L17 6 FILE MEDLINE
L18 0 FILE CAPLUS
L19 58 FILE BIOSIS
L20 10 FILE EMBASE
L21 0 FILE WPIDS

TOTAL FOR ALL FILES

L22 74 (MULTIVAR? ANALYSIS OR REFLEX ALGORITHM? OR REFLEX? TEST?) AND L16

=> s l22 and (computer program? or code or coding or sequence or network or process?)

L23 0 FILE MEDLINE
L24 0 FILE CAPLUS
L25 0 FILE BIOSIS
L26 0 FILE EMBASE
L27 0 FILE WPIDS

TOTAL FOR ALL FILES

L28 0 L22 AND (COMPUTER PROGRAM? OR CODE OR CODING OR SEQUENCE OR NETWORK OR PROCESS?)

=> s l22 and computer?

L29 0 FILE MEDLINE
L30 0 FILE CAPLUS
L31 1 FILE BIOSIS
L32 1 FILE EMBASE
L33 0 FILE WPIDS

TOTAL FOR ALL FILES

L34 2 L22 AND COMPUTER?

=> dup rem l34

PROCESSING COMPLETED FOR L34

L35 2 DUP REM L34 (0 DUPLICATES REMOVED)

=> d cbib abs 1-2

L35 ANSWER 1 OF 2 EMBASE COPYRIGHT 1999 ELSEVIER SCI. B.V.

1998301595 EMBASE Prognostic value of prostate specific antigen before, during and after radiotherapy. Reni M.; Bolognesi A.. M. Reni, Department of Radiochemotherapy, San Raffaele Hospital, via Olgettina 60, 20132 Milan, Italy. Cancer Treatment Reviews 24/2 (91-99) 1998.
Refs: 94.
ISSN: 0305-7372. CODEN: CTREDJ. Pub. Country: United Kingdom. Language: English.

L35 ANSWER 2 OF 2 BIOSIS COPYRIGHT 1999 BIOSIS
1994:548086 Document No.: PREV199598007634. The diagnosis of ovarian tumor by stepwise discriminant analysis of multivariate. Wang, Min; Zhang; Zhongfu;

Shang; Tao; et al.. Dep. Gynecol. Obstetrics, Second Affiliated Hosp., China Med. Univ., Shenyang 110001 China. Journal of China Medical University, (1994) Vol. 23, No. 3, pp. 257-258. ISSN: 0258-4646.

Language:

Chinese. Summary Language: Chinese; English.

AB The serum contents of CEA, beta-2-MG, AFP beta-HCG, Ferritin Zn, Cu, Cu/Zn, LDH were determined in 50 normal women and 107 patients with ovarian tumors (benign 56, malignant 51 before operation. The data of

these 9 items measured were put into AST computer for discrimination by stepwise multivariate analysis. The accordant rate in differentiating benign from malignant ovarian tumor for inside and outside examples were 84.4% and 86.6%.

=> s l16 and (computer program? or code or coding or sequence or network or process?)

L36 199 FILE MEDLINE
L37 305 FILE CAPLUS
L38 140 FILE BIOSIS
L39 126 FILE EMBASE
L40 27 FILE WPIDS

TOTAL FOR ALL FILES

L41 797 L16 AND (COMPUTER PROGRAM? OR CODE OR CODING OR SEQUENCE OR NETWORK OR PROCESS?)

=> s l16 and computer read?

L42 0 FILE MEDLINE
L43 0 FILE CAPLUS
L44 0 FILE BIOSIS
L45 0 FILE EMBASE
L46 0 FILE WPIDS

TOTAL FOR ALL FILES

L47 0 L16 AND COMPUTER READ?

=> s l41 and (serum or plasma or whole blood)

L48 51 FILE MEDLINE
L49 59 FILE CAPLUS
L50 48 FILE BIOSIS
L51 40 FILE EMBASE
L52 7 FILE WPIDS

TOTAL FOR ALL FILES

L53 205 L41 AND (SERUM OR PLASMA OR WHOLE BLOOD)

=> s 153 and urine

L54 0 FILE MEDLINE
L55 6 FILE CAPLUS
L56 1 FILE BIOSIS

<-----User Break----->

u

SEARCH ENDED BY USER

=> s 141 and urine

L58 3 FILE MEDLINE
L59 14 FILE CAPLUS
L60 2 FILE BIOSIS
L61 2 FILE EMBASE
L62 1 FILE WPIDS

TOTAL FOR ALL FILES

L63 22 L41 AND URINE

=> s (153 or 163) and diagnos?

L64 15 FILE MEDLINE
L65 25 FILE CAPLUS
L66 21 FILE BIOSIS
L67 23 FILE EMBASE
L68 5 FILE WPIDS

TOTAL FOR ALL FILES

L69 89 (L53 OR L63) AND DIAGNOS?

=> s (153 or 163) and diagnos?(1)automat?

L70 0 FILE MEDLINE
L71 2 FILE CAPLUS
L72 0 FILE BIOSIS
L73 0 FILE EMBASE
L74 1 FILE WPIDS

TOTAL FOR ALL FILES

L75 3 (L53 OR L63) AND DIAGNOS?(L) AUTOMAT?

=> s wagner g?/au,in

'IN' IS NOT A VALID FIELD CODE

L76 1357 FILE MEDLINE
L77 2073 FILE CAPLUS
L78 1702 FILE BIOSIS
'IN' IS NOT A VALID FIELD CODE
L79 1070 FILE EMBASE
L80 447 FILE WPIDS

TOTAL FOR ALL FILES

L81 6649 WAGNER G?/AU,IN

=> dup rem 175

PROCESSING COMPLETED FOR L75

L82 3 DUP REM L75 (0 DUPLICATES REMOVED)

=> d cbib abs 1-3;s 181 and 116

L82 ANSWER 1 OF 3 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 1997-451474 [42] WPIDS

AB GB 2311614 A UPAB: 19971021

An **automatic diagnostic** apparatus (1) comprises a controller (3), sensing system (15) and output means (11, 23). The sensing

system performs an assay on a sample and communicates data from the assay to the controller. This data is then **processed** and output. Also claimed are: (i) a disposable biosensor comprising a plastic sensor body with a depression leading to an outlet; apertured counter and working electrodes abutting different sides of the depression and communicating with the outlet; an **immunoassay** system in close proximity to the working electrode; and an apertured sensor inlet within the working electrode and in communication with the **immunoassay** system, both electrodes being manufactured from an electroconductive plastic; (ii) a conducting plastic electrode; (iii) a carrier for materials in a centrifuge having 2 regions such that, during spinning, a heavier component collects in one region and a lighter component collects in the other, the carrier being constructed to obstruct remixing; (iv) a disposable reagent cartridge comprising a body with reagent-containing depression(s) in it and sealed with a removable cover bearing a **bar-code** to identify the reagent and/or test requiring that reagent; and (v) a prepacked disposable **diagnostic** testing kit comprising removable cover; sample holder; biosensor; through-flow producing means; and reagent cartridge.

USE - The apparatus is especially useful for **diagnosing** and monitoring acute myocardial infarction by monitoring ex vivo levels of cardiac marker proteins such as CK, CK-MM, CK-MB, **myoglobin**, cardiac myosin light chain(s), **Troponin T** and/or **Troponin I** by electrochemical **immunoassay** (claimed), and can be used to monitor reperfusion. The carrier is used in a centrifuge

to

separate a patient's sample into its constituent components, e.g. to separate red blood cells from **plasma**. Use of the **diagnostic** kit involves placing the sample in the sample holder, fitting the biosensor to the through-flow producing means, and then placing the sample holder, biosensor and reagent cartridge in the appropriate place in the apparatus. The apparatus senses when all the components have been correctly placed within the apparatus and then carries out the assay.

ADVANTAGE - The biosensor is made from relatively inexpensive materials and so can be disposed of after use, removing the need for time-consuming cleaning. In the sample carrier, the lighter separated material may be easily withdrawn with significantly reduced risk of accidental contamination by the heavier material. The reagent cartridge saves time and reduces errors in preparing the reagents.
Dwg.1/15

L82 ANSWER 2 OF 3 CAPLUS COPYRIGHT 1999 ACS

1994:479972 Document No. 121:79972 **Serum troponin T** as a

biochemical marker of ischemic myocardial injury. Zaninotto, M.; Secchiero, S.; Rubin, D.; Mussap, M.; Accorsi, F.; Cocco, C.; Burlina, A. (Ist. di Med. di Lab., Univ. degli Stud., Padua, Italy). Eur. J. Lab. Med., 1(2), 79-85 (English) 1993. CODEN: EJLAEW.

AB **Troponin T** is a structurally bound protein of the striated muscle cells; the different amino acid **sequence** of the protein obsd. in cardiac and skeletal muscles makes it possible to raise antisera against cardiac **troponin T**. A new **automated enzyme immunoassay** with cardiospecific monoclonal antibodies was used to

detect cardiac circulating **troponin T** in samples from 40 patients (group 1) with acute myocardial infarction (AMI), monitored serially for 5 days after admission, 33 of whom were on thrombolytic treatment, and from 30 non-AMI patients (group 2), 8 of whom had non-ischemic chest pain, 7 non-ischemic cardiopathy, 10 multiple trauma without chest contusion and 5 skeletal muscle injuries. Values for **troponin T** were compared with those for creatine kinase, MB **isoenzyme** (activity and mass concn.), **myoglobin** and lactate dehydrogenase. **Troponin T** sensitivity in detecting myocardial infarction is 1.0 from 8 h to 126 h after the onset of chest pain, and the specificity is 0.96. The time of "**diagnostic window**" of this protein is significantly wider than that obsd. with the other parameters considered. Reperfusion of the infarct-related artery influences the release of **troponin T** into **plasma**, with a statistically significant difference between the peak values ($p=0.0364$) and time to peak values ($p=0.0001$) of patients with reperfused and those of patients with non-reperfused myocardial infarction. Cardiac **troponin T** measurement is a substantial advance in the lab. **diagnosis** of acute myocardial infarction and in its monitoring.

L82 ANSWER 3 OF 3 CAPLUS COPYRIGHT 1999 ACS

1993:120105 Document No. 118:120105 Preliminary evaluation of an experimental **clinical chemistry analyzer** developed for space medicine. Wu, Alan H. B.; Gornet, Terrie G.; Schenkel, Olivir; Smith-Cronin, Lynn; Graham, Gary A.; Tonnesen, Alan S.; McKinley, Bruce A. (Med. Sch., Univ. Texas, Houston, TX, 77030, USA). Clin. Chem. (Washington, D. C.), 39(1), 37-44 (English) 1993. CODEN: CLCHAU. ISSN: 0009-9147.

AB An exptl. **clin. chem. analyzer** system was designed and built to demonstrate the feasibility of **clin. chem.** as part of a medical-care system at NASA's planned space station Freedom. This is a report of the performance of the exptl. **analyzer**, called a medical development unit (MDU), for selected analytes in a lab. setting in prepn. for a preliminary clin. trial at patients' bedsides in an intensive-care unit. Within-run CVs ranged from 0.7% for sodium to 7.1% for phosphorus; day-to-day CVs ranged from 1.0% for chloride to 23.4% for calcium. Correlation of patients' blood sample analyses compared well with those by Ektachem E700 and other high-vol. central lab. **analyzers** (r ranged from 0.933 for creatine kinase MB **isoenzyme** to 0.997 for potassium), except for Hb ($r = 0.901$) and calcium ($r = 0.823$). Although several CVs obtained in this study exceeded theor. desired precision limits based on biol. variations, performance was adequate for clin. lab. **diagnosis**. The effect of potentially interfering concns. of Hb, bilirubin, and lipids was examd.: the only effect was neg. interference with calcium analyses by high concns. of bilirubin. The effects of preanal. variables and the performance of exptl. sample-transfer cups designed to retain sample and ref. liq. in microgravity were also examd. Continued development of the MDU system is recommended, esp. **automation** of sample **processing**.

L83	2 FILE MEDLINE
L84	0 FILE CAPLUS
L85	6 FILE BIOSIS
L86	1 FILE EMBASE
L87	0 FILE WPIDS

TOTAL FOR ALL FILES

L88 9 L81 AND L16

=> dup rem 188

PROCESSING COMPLETED FOR L88

L89 7 DUP REM L88 (2 DUPLICATES REMOVED)

=> d 1-7 cbib abs

L89 ANSWER 1 OF 7 MEDLINE

DUPLICATE 1

1999032324 Document Number: 99032324. Implementation of a computerized cardiovascular information system in a private hospital setting [see comments]. Taylor G S; Muhlestein J B; **Wagner G S**; Bair T L; Li P; Anderson J L. (Department of Medicine, University of Utah, LDS Hospital, Salt Lake City 84143, USA.)AMERICAN HEART JOURNAL, (1998 Nov) 136 (5) 792-803. Journal code: 3BW. ISSN: 0002-8703. Pub. country:

United

States. Language: English.

AB BACKGROUND: The use of clinical databases improves quality of care, reduces operating costs, helps secure managed care contracts, and assists in clinical research. Because of the large physician input required to maintain these systems, private institutions have often found them difficult to implement. At LDS Hospital in Salt Lake City, Utah, we developed a cardiovascular information system (LDS-CIS) patterned after the Duke University Cardiovascular Database and designed for ease of use in a private hospital setting. METHODS: Features of the LDS-CIS include concise single-page report forms, a relational database engine that is easily queried, automatic generation of final procedure reports, and merging of all data with the hospital's existing information system. So far, data from more than 14,000 patients have been entered. RESULTS: LDS-CIS provides access to data for research to improve patient care. For example, by using data generated by LDS-CIS, the policy requiring surgical backup during percutaneous transluminal coronary angioplasty was eliminated, resulting in no increased patient risk while saving nearly \$1 million in 1 year. LDS-CIS generates physician feedback reports documenting performance compared with peers. This physician self-evaluation has standardized and improved care. Information from LDS-CIS has been **instrumental** in securing and maintaining managed care contracts. LDS-CIS risk analysis provides physicians with outcomes data specific to their current patient's demographics and level of disease to assist in point of care decisions. CONCLUSION: The use of LDS-CIS in the routine operations of LDS Hospital heart services has been found to be feasible, beneficial, and cost-effective.

L89 ANSWER 2 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS

1996:534619 Document No.: PREV199699256975. Cardiac **troponin T** levels for risk stratification in acute myocardial ischemia. Ohman, E. Magnus (1); Armstrong, Paul W.; Christenson, Robert H.; Granger, Christopher B.; Katus, Hugo A.; Hamm, Christian W.; O'Hanesian, Mary Ann; **Wagner, Galen S.**; Kleiman, Neal S.; Harrell., Frank E., Jr.; Califf, Robert M.; Topol, Eric J.. (1) Box 3151, Duke Univ. Med. Cent., Durham, NC 27710 USA. New England Journal of Medicine, (1996) Vol. 335, No. 18, pp. 1333-1341. ISSN: 0028-4793. Language: English.

AB Background: The prognosis of patients hospitalized with acute myocardial ischemia is quite variable. We examined the value of serum levels of cardiac **troponin T**, serum creatine kinase MB (CK-MB) levels, and electrocardiographic abnormalities for risk stratification in patients with acute myocardial ischemia. Methods: We studied 855 patients within

12

hours of the onset of symptoms. Cardiac **troponin T** levels, CK-MB levels, and electrocardiograms were analyzed in a blinded fashion at the

core laboratory. We used logistic regression to assess the usefulness of baseline levels of cardiac **troponin T** and CK-MB and the electrocardiographic category assigned at admission - ST-segment elevation, ST-segment depression, T-wave inversion, or the presence of confounding factors that impair the detection of ischemia (bundle-branch block and paced rhythms) - in predicting outcome. Results: On admission, 289 of 801 patients with base-line serum samples had elevated **troponin T** levels (gt 0.1 ng per milliliter). Mortality within 30 days was significantly higher in these patients than in patients with lower levels of **troponin T** (11.8 percent vs. 3.9 percent, P lt 0.001). The **troponin T** level was the variable most strongly related to 30-day mortality (chi-square = 21, P lt 0.001), followed by

the

electrocardiographic category (chi-square = 14, P = 0.003) and the CK-MB level (chi-square = 11, P = 0.004). **Troponin T** levels remained significantly predictive of 30-day mortality in a model that contained

the

electrocardiographic categories and CK-MB levels (chi-square = 9.2, P = 0.027). Conclusions: The cardiac **troponin T** level is a powerful, independent risk marker in patients who present with acute myocardial ischemia. It allows further stratification of risk when combined with standard measures such as electrocardiography and the CK-MB level.

L89 ANSWER 3 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS

1996:264058 Document No.: PREV199698820187. Serum **myoglobin** for the early non-invasive detection of coronary reperfusion in patients with acute myocardial infarction. Jurlander, B.; Clemmensen, P.; Ohman, E. Magnus; Christenson, R.; **Wagner, G. S.**; Grande, P. (1). (1) Heart Cent. Rigshosp., Natl. Univ. Hosp., Blegdamsvej 9, DK-2100 Copenhagen Denmark. European Heart Journal, (1996) Vol. 17, No. 3, pp. 399-406. ISSN: 0195-668X. Language: English.

AB The ideal non-invasive method for detecting coronary reperfusion has not yet been established. In 63 patients with acute myocardial infarction, serum **myoglobin** and creatine kinase-MB were measured every 15 min. Thrombolytic treatment was given (n=52) and acute coronary angiography showed a patent infarct-related artery in 49 patients while

14

patients had no coronary reperfusion. Median time to peak serum **myoglobin** was shorter (reperfusion group 178 min vs no reperfusion group 480 min, P lt 0.0001) than time to peak serum creatine kinase-MB (reperfusion group 550 min vs no reperfusion group 1080 min, P lt 0.0001),

0.0001),

P lt 0.0001. **Myoglobin** appearance rate, calculated as the concentration at 2 h divided by baseline values (Mb-2/Mb-0) was highest

in

the reperfusion group (4.0 vs 1.6), P lt 0.001. An earlier proposed

index,

Mb-2/Mb-0 gt 2.4 for identification of reperfusion 2 h after thrombolytic therapy, showed predictive values of positive and negative tests of 0.94 and 0.44, respectively. Combining this index with signs of medium to larger infarct size (Mb-2 gt 200 mu-g cntdot 1-1) increased the

predictive

value of the negative test to 1.00. In patients with signs of minor infarcts (Mb-2 lt 200 mu-g cntdot 1-1) the predictive values of positive and negative tests were 0.94 and 0.79, respectively, 5 h after onset of thrombolytic therapy. An early rise and a peak in serum **myoglobin** values seems to be a reliable and simple non-invasive indicator of successful and unsuccessful reperfusion therapy.

L89 ANSWER 4 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS

1996:13590 Document No.: PREV199698585725. **Myoglobin** kinetics in

serum are correlated to the rate of resolution of the ST-segment deviation
in AMI patients. Jurlander, Birgit; Clemmensen, Peter; Host, Nis; Galatius-Jensen, Soren; Krucoff, Mitchell W.; **Wagner, Galen S.**; Grande, Peer. Heart Cent., Rigshospitalet, National Univ. Hosp., Hillerod Sygehus, Copenhagen Denmark. Circulation, (1995) Vol. 92, No. 8 SUPPL., pp. I679. Meeting Info.: 68th Scientific Session of the American Heart Association Anaheim, California, USA November 13-16, 1995 ISSN: 0009-7322.
Language: English.

L89 ANSWER 5 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS
1995:145107 Document No.: PREV199598159407. Diagnostic Ability of a Single Admission Value of Serum **Myoglobin**, **Troponin-T** and CK-MB in Acute Myocardial Infarction Patients. Jurlander, Birgit (1); Clemmensen, Peter; Galatius-Jensen, Soren; **Wagner, Galen S.**; Grande, Peer. (1) Dep. Med. B, Rigshosp., Hillerod Sygehus, Univ. Copenhagen, Copenhagen Denmark. Journal of the American College of Cardiology, (1995) Vol. 0, No. SPEC. ISSUE, pp. 248A. Meeting Info.: 44th Annual Scientific Session of the American College of Cardiology New Orleans, Louisiana, USA March 19-22, 1995 ISSN: 0735-1097. Language: English.

L89 ANSWER 6 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS
1996:8093 Document No.: PREV199698580228. Changes in serum **myoglobin** mirror ECG ST-segment shifts in patients with acute myocardial ischaemia. Jurlander, B. (1); Clemmensen, P.; Host, N.; Galatius-Jensen, S.; Drucoff, M. W.; **Wagner, G. S.**; Grande, P.. (1) Heart Cent., Natl. Univ. Hosp., Copenhagen Denmark. European Heart Journal, (1995) Vol. 16, No. ABSTR. SUPPL., pp. 41. Meeting Info.: XVIIth Congress of the European Society of Cardiology Amsterdam, Netherlands August 20-24, 1995 ISSN: 0195-668X. Language: English.

L89 ANSWER 7 OF 7 MEDLINE
90352781 Document Number: 90352781. Relative increase in creatine kinase MB **isoenzyme** during reperfusion after myocardial infarction is method dependent. Christenson R H; Clemmensen P; Ohman E M; Toffaletti J; Silverman L M; Grande P; Vollmer R T; **Wagner G S.** (Department of Laboratory Service, Durham Veterans Administration Medical Center, NC 27705..)CLINICAL CHEMISTRY, (1990 Aug) 36 (8 Pt 1) 1444-9. Journal code:

DBZ. ISSN: 0009-9147. Pub. country: United States. Language: English.
AB We compared relative increases in creatine kinase (EC 2.7.3.2) MB **isoenzyme** (CK-MB) after reperfusion in myocardial infarction for four popular methods: electrophoresis, immunoinhibition, the "Magic Lite" (Ciba-Corning) system, and the Stratus (Dade). In a method comparison study, we confirmed that all four methods correlated (r greater than 0.95). Electrophoresis demonstrated the greatest scatter about the regression line, immunoinhibition the least. For CK-MB quantities near each method's "positive cutoff" indicating myocardial infarction, results by all methods agreed in 95% of samples. To characterize relative increases in CK-MB, we computer-fitted data obtained from each method for serial specimens collected from six acute myocardial infarction patients during myocardial reperfusion. Although for each individual patient the four methods appeared to exhibit parallelism, the methods differed significantly in terms describing their appearance rate, peak-time & fall-off, and time-to-peak activity. Consistent with these data, we found that the relative CK-MB increases at various times after reperfusion, compared with baseline concentrations, are method-dependent. Therefore, when using CK-MB for indicating coronary patency, one must develop

specific limits for each method utilized.

=> s automat?(l)diagnos? and (cardiac or myocardi?)

L90 360 FILE MEDLINE
L91 44 FILE CAPLUS
L92 261 FILE BIOSIS
L93 297 FILE EMBASE
L94 50 FILE WPIDS

TOTAL FOR ALL FILES

L95 1012 AUTOMAT?(L) DIAGNOS? AND (CARDIAC OR MYOCARDI?)

=> s l95 and (computer(w)(read? or program?) or code or coding or sequence or network or process?)

L96 106 FILE MEDLINE
L97 5 FILE CAPLUS
L98 37 FILE BIOSIS
L99 70 FILE EMBASE
L100 20 FILE WPIDS

TOTAL FOR ALL FILES

L101 238 L95 AND (COMPUTER(W) (READ? OR PROGRAM?) OR CODE OR CODING OR SEQUENCE OR NETWORK OR PROCESS?)

=> s analyze? and immunoassay and clin? chem? and device? and l101

L102 0 FILE MEDLINE
L103 0 FILE CAPLUS
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L105 0 FILE EMBASE
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L107 0 ANALYZE? AND IMMUNOASSAY AND CLIN? CHEM? AND DEVICE? AND L101

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L108 0 FILE MEDLINE
L109 1 FILE CAPLUS
L110 0 FILE BIOSIS
L111 0 FILE EMBASE
L112 0 FILE WPIDS

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L113 1 (IMMUNOASSAY OR CLIN? CHEM?) AND DEVICE? AND L101

=> d cbib abs

L113 ANSWER 1 OF 1 CAPLUS COPYRIGHT 1999 ACS

1995:888100 Document No. 123:280286 **Device for processing**
nucleic acids in various preparations. Kandolf, Reinhard (Boehringer
Mannheim GmbH, Germany). Eur. Pat. Appl. EP 673679 A1 19950927, 14 pp.
DESIGNATED STATES: R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL. (German).
CODEN: EPXXDW. APPLICATION: EP 95-103907 19950317. PRIORITY: DE
94-4409705 19940322.

AB Apps. and methods are disclosed for **processing** nucleic acids in
nucleic acid-contg. samples such as histol. tissue sections, cytospin
prepns., chromosome prepns., etc. The apps. are esp. suitable for